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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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WASHINGTON, DC 20004

EXAMINER

BECK, ALEXANDER S

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/669,715

Applicant(s)

BAEK, HEUME IL

Examiner

Alexander S. Beck

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1: ☒ Certified copies of the priority documents have been received.
- 2: ☐ Certified copies of the priority documents have been received in Application No. _____.
- 3: ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Acknowledgment is made of the Amendment – After Non-Final Rejection, filed by the Applicant on 30 November 2006, in which: Claims 1,3,7 and 8 are amended; new Claims 10-17 are added; and the rejections of the claims are traversed. Claims 1-17 are currently pending in U.S. Application Serial No. 10/669,715, and an Office action on the merits follows.

Response to Arguments

2. Applicant's arguments, see pages 7-10 filed 30 November 2006, with respect to the rejections of Claims 1-9 have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, new grounds of rejection are made in view of Springer (U.S. Patent No. 5,936,608) and Tajima et al. (U.S. Patent No. 6,222,512 B1).

Drawings

3. The objection to the drawings set forth in paragraph 1 of the previous Office Action (i.e., the non-final Office Action mailed on 30 June 2006), is withdrawn in light of the Applicant's arguments.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. **Claim 9** is rejected under 35 U.S.C. 102(b) as being anticipated by Tajima et al. (U.S. Patent No. 6,222,512 B1, hereinafter TAJIMA).

As to independent **Claim 9**, TAJIMA teaches/suggests a driving method of a liquid crystal display, which is driven having one frame divided into first and second fields, comprising the steps of: implementing a first picture for a first field; and implementing a second picture for a second field such that a brightness level in a specific area of the second picture has a different brightness level in accordance with a type of image displayed in a specific area of the liquid crystal display panel than a brightness level of the first picture. (TAJIMA: col. 12, ln. 19-46)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1-8,10 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admission of Prior Art (hereinafter AAPA) in view of Springer (U.S. Patent No. 5,936,608, hereinafter SPRINGER).

As to independent **Claims 1 and 7**, AAPA teaches/suggests a liquid crystal display in **Figures 1 and 2**, comprising: a liquid crystal display panel **6** having a liquid crystal cell **C1c** at each intersection area of gate lines **GLm** and data lines **DLn**; a computer **12** for providing data of the liquid crystal display panel; an interface part **2** for receiving the data provided by the computer; a timing controller **4** realigning

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the data; a data driver 8 supplying the realigned data to the data lines; and a gate driver 10 supplying a scan pulse to the gate lines. (AAPA: pg. 2, par. [0003] – pg. 4, par. [0010])

AAPA does not disclose expressly the computer providing data and position data for a specific area; a video processor for generating processed data for the specific area from the position data and the data such that the brightness level of the processed data for the specific area is different than the brightness level of the data; a memory temporarily storing the processed data; the timing controller realigning the processed data; the data driver supplying the realigned data; or a position designator designating the specific area of the liquid crystal display panel where the processed data is implemented.

SPRINGER, analogous in art with AAPA, teaches/suggests a computer 100 in **Figure 2** for providing data and position data for a specific area of a display panel 80 (wherein position data is inherently suggested in the addressing of images to be displayed); a video processor 150 for generating processed data for the specific area from the position data and the data such that the brightness level of the processed data for the specific area is different/higher than the brightness level of the data; a memory 155 temporarily storing the processed data; and a position designator 145 designating the specific area of the liquid crystal display panel where the processed data is implemented (SPRINGER: col. 4, ln. 29 – col. 5, ln. 42; col. 6, ln. 15-34)

In order to establish obviousness under 35 U.S.C. 103, it must appear that state of relevant prior art was such that claimed invention would have been obvious to one of ordinary skill in the art. In judging the “ordinary level of skill” in the art, it is the level of skill of those who normally attack the problems of the art that counts, and those who do most of the problem solving in the art involved are graduate engineers; as such they are chargeable with certain general knowledge concerning the principles of engineering, outside the narrow field involved, and with the skills, ingenuity and competence of the average professional engineer. Mueller Brass Co. v. Reading Industries, Inc., 176 U.S.P.Q. 361,369 (E.D.Pa., 1972)

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the teachings of AAPA such that the interface part comprised the video processor, memory and position designator of SPRINGER for generating processed data for a specific area from position data and image data such that the brightness level of the processed data for the specific area is different than the brightness level of the data, as taught/suggested by SPRINGER (wherein the data is applied to the display panel through the timing controller and data drivers, as taught/suggested by AAPA). Moreover, one of ordinary skill in the art would appreciate that the graphics controller of SPRINGER can be adapted to the liquid crystal display of AAPA, and is not limited to the display technology disclosed in SPRINGER.

The suggestion/motivation for doing so would have been because increasing the brightness of selective visual objects on a display with respect to other visual objects will highlight which control or application area the computer system user is currently focused on, and therefore enhance both information management and user interaction. (SPRINGER: col. 2, ln. 44-61)

As to **Claim 2**, SPRINGER further teaches/suggests wherein the position designator **145** designates the specific area in accordance with a program in a computer system. (SPRINGER: col. 4, ln. 29 – col. 5, ln. 42; col. 6, ln. 15-34)

Similarly, it would have been obvious to a person of ordinary skill in the art to designate the area in accordance with a program in a computer system, as taught/suggested by SPRINGER, because increasing the brightness of selective visual objects on a display with respect to other visual objects will highlight which control or application area the computer system user is currently focused on, and therefore enhance both information management and user interaction. (SPRINGER: col. 2, ln. 44-61)

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As to **Claim 3**, SPRINGER further teaches/suggests the memory 155 temporarily stores position data for the specific area; wherein this teaching is inherently suggested in the disclosure of SPRINGER that modified display data corresponding to visual objects at an increased brightness are stored in the memory. (SPRINGER: col. 4, ln. 29 – col. 5, ln. 42; col. 6, ln. 15-34)

As to **Claim 4**, neither AAPA nor SPRINGER disclose expressly wherein the video processor is comprised of a multiplexor.

However, the Examiner takes Official Notice that the use of multiplexing circuitry in video processors is old and well known in the art.

Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to further modify the teachings of AAPA and SPRINGER such that the video processor comprised of a multiplexor.

The suggestion/motivation for doing so would have been because incorporating a multiplexor into a video processor would significantly reduce the cost production, as a multiplexor enables multiple sources of data to be transmitted over a single channel (versus providing a dedicating channel for each source of data), as one of ordinary skill in the art would appreciate.

As to **Claim 5**, all of the claim limitations have already been discussed and met by AAPA and SPRINGER, as detailed in the above paragraphs with respect to independent Claims 1 and ⁷~~6~~.

As to **Claims 6 and 8**, all of the claim limitations have already been discussed and met by AAPA and SPRINGER, as detailed in the above paragraphs with respect to independent Claim 7 and dependent claim 3, respectively.

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As to **Claims 10 and 14**, AAPA as modified by SPRINGER teaches/suggests wherein the memory is connected between the video processor and a timing controller. (AAPA: **Figure 1**) (SPRINGER: col. 4, ln. 60 – col. 5, ln. 8) For example, as noted in the above discussion with respect to Claims 1 and 7, the interface part of AAPA comprising the video processor, memory and position designator of SPRINGER connects with the timing controller 4 for sequentially displaying data on the panel 6.

8. **Claims 11-13 and 15-17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Admission of Prior Art and Springer (U.S. Patent No. 5,936,608) as applied to claims 1-8, 10 and 14 above, and further in view of Tajima et al. (U.S. Patent No. 6,222,512 B1).

As to **Claims 11-13 and 15-17**, SPRINGER teaches/suggests wherein the memory 155 stores data and processed data to display an image on the display panel. (SPRINGER: col. 4, ln. 29 – col. 5, ln. 42; col. 6, ln. 15-34)

Neither AAPA nor SPRINGER disclose expressly wherein a frame of image data stored in the memory includes at least two fields; wherein each of the two fields correspond to a different brightness level; or wherein at least one of the two fields stores black data, except for a specific area having a different brightness level.

TAJIMA, analogous in art with AAPA, teaches/suggests a liquid crystal display device comprising a memory 71, wherein a frame of image data stored in the memory includes at least two fields; wherein each of the two fields correspond to a different brightness level; or wherein at least one of the two fields stores black data, except for a specific area having a different brightness level. (TAJIMA: col. 12, ln. 19-46)

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At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to further modify the teachings of AAPA and SPRINGER such that the frame memory stored first and second fields corresponding to a single frame of image data, as taught/suggested by TAJIMA.

The suggestion/motivation for doing so would have been to achieve a display device that prevents prominent image defects, such as flicker, and affords a high-quality image display. (TAJIMA: abstract)

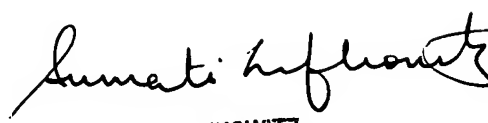
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Alexander S. Beck** whose telephone number is **(571) 272-7765**. The examiner can normally be reached on M-F, 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Sumati Lefkowitz** can be reached on **(571) 272-3638**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

asb
2/23/07


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